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T-762 P.015/021 F-679

**TAB 1**

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Attorney Docket No.: DA-047-US-01

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Fouad Mehawej  
Serial No.: 10/066,935  
Filed: February 4, 2002  
Title: SUPERABSORBENT COMPOSITE AND ABSORBENT ARTICLES  
INCLUDING SAME

Art Unit: 3761  
Examiner: Stephens

MAIL STOP AMENDMENT  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

DECLARATION OF FOUAD D. MEHAWEJ

I, Fouad D. Mehawej, state and declare as follows:

1. I am the named inventor on the above-captioned application.
2. I discovered that when a high loft, i.e., low density, nonwoven web is impregnated with superabsorbent polymer formed in situ, it unexpectedly absorbs more water than a less lofty, i.e., more dense, nonwoven web having a greater weight percent superabsorbent polymer.
3. I further discovered that when superabsorbent polymer forms in situ in a high loft nonwoven web from an aqueous superabsorbent polymer precursor composition that is present throughout the web, i.e., the web is impregnated with superabsorbent polymer precursor composition, the fibrous structure of the high loft nonwoven web compresses due to the force of the drying superabsorbent polymer and the tacky nature of the superabsorbent polymer on the fibers to form a much thinner, denser composite. The superabsorbent polymer forms as an essentially continuous phase throughout the web matrix including along the length of the fibers and in the interstices of the fibers with no visible air gaps when viewed by the naked eye. Due to the presence of the fibers of the web, the superabsorbent polymer technically is not a true continuous phase.
4. When water is added to the dried composite, the superabsorbent polymer absorbs the water and begins to swell, and the composite expands to accommodate the

## CERTIFICATE OF TRANSMISSION

I hereby certify under 37 CFR 81.8(a) that this correspondence is being electronically transmitted to the United States Patent and Trademark Office on April 7, 2006.

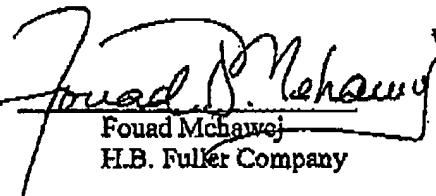
Jefferson Johnson  
Signature  
Jefferson Johnson  
Typed or Printed Name of Person Signing Certificate

swelling superabsorbent polymer. The composite expands due to the resilient nature of the fibers of the nonwoven web, the original high loft structure of the nonwoven web, and the change in the nature of the superabsorbent polymer. As the superabsorbent polymer absorbs water, the superabsorbent polymer turns to a gel, and its intermolecular force decreases and the force exerted by the gelling superabsorbent polymer on the fibers of the nonwoven web decreases. In response, the resilient fibers of the nonwoven web spring back to a more relaxed state in an attempt to achieve their original high loft structure. As the fibers move to their more relaxed state and the nonwoven web expands, fluid is better able to penetrate the depth of the composite and to contact additional superabsorbent polymer located therein.

I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under section 1001 Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent on which this statement is directed.

Further I declare not.

Date: April 7, 2006

  
Fouad Mchawej  
H.B. Fuller Company